

A GUIDEBOOK OF FINANCIAL TOOLS

April 1999 Revision

FOREWORD

The future course of environmental management in America is increasingly being viewed in the context of "sustainable systems." Such systems must exhibit sufficient institutional, technical, managerial and financial capacity to prosper and endure. The question of how to pay for - or how to sustainably finance - the continuing demands for pollution prevention and ecosystem protection is a central theme for the work of the U.S. Environmental Protection Agency's (EPA) Environmental Financial Advisory Board and the Agency's network of university-based Environmental Finance Centers. This *Guidebook* is intended to be a working tool to enable practitioners in the public and private sector to find the appropriate methods to pay for environmental protection efforts.

The genesis of this 1999 *Guidebook* remains the 1992 report of EPA's State Capacity Task Force on Alternative Financing Mechanisms. This report was so well-received that a significant expansion seemed the natural thing to do. In a real sense, this and future *Guidebook* updates will remain as final drafts. The reason is not the lack of information needed to ensure completion: quite the contrary. We found in pulling together this extraordinary amount of material that there is so much going on that by press times we always have more tools to be added. Therefore, we have determined to continue to undertake periodic updates of the *Guidebook*. To this end, we ask *Guidebook* users (via Appendix F) to send us suggestions for new tools and changes and additions to those listed.

The main laboratories for this fascinating environmental financing experimentation are, not surprisingly, found at the regional and local levels. The financing arrangements that will characterize how we will pay for the next generation of pollution prevention and ecosystem prevention are even now being formed in this crucible.

We remain deeply indebted to the members of the Environmental Financial Advisory Board and the Directors and Staff of the Environmental Finance Centers for their contributions to this body of work. Without the efforts on the part of these worthy practitioners in the finance arena, the *Guidebook* would remain an unfulfilled goal. Special thanks are also due to past and present EPA Environmental Finance Program staff -- Victoria Kennedy, William Bivens, and Tim McProuty. Finally, Ms. Diane Doyle of GCI Information Services must be thanked for her efforts to ensure the accuracy of Internet addresses throughout the *Guidebook* and for loading the entire document on the Environmental Finance Program's Web site.

John C. Wise
Executive Director, Environmental Financial Advisory Board

A GUIDEBOOK OF FINANCIAL TOOLS

April 1999 Revision

ABSTRACT

The April 1999 revision of the *A Guidebook of Financial Tools* is a reference work intended to provide an overview of a wide range of ways and means that are useful in paying for sustainable environmental systems. It is divided into 10 sections, presenting outline information on approximately 340 financial tools. The first five sections present comprehensive financing tools that include traditional means of raising revenue, borrowing capital, enhancing credit, creating public-private partnerships, and ways of providing technical assistance. The next five sections present financing tools that are, will, or might soon be, available to address significant environmental priorities, including ways of lowering the costs of compliance, encouraging pollution prevention, paying for community-based environmental protection, financing brownfields redevelopment, and improving access to capital for small businesses and the environmental goods and services industry. Each tool is described along with its actual and potential uses, advantages and limitations, and references for further information. The *Guidebook* is the product of a collaborative effort among members of the United States Environmental Protection Agency's (EPA) Environmental Financial Advisory Board, the Directors and staff of eight university-based Environmental Finance Centers, the staff of EPA's Environmental Finance Program, and numerous other contributors. The *Guidebook* contains forms for users to provide comments and suggestions, and it will continue to be revised and updated as necessary. In this spirit, the *Guidebook* also now provides users and readers with a site in its electronic version (Appendix A.) for exciting new financing tools to be added during the time between hard copy revisions. The *Guidebook's* location on the World Wide Web (Internet address) is: <http://www.epa.gov/efinpage/guidbk98/index.htm>.

OVERVIEW OF COMPARATIVE CRITERIA USED IN THE *GUIDEBOOK*

April 1999 Revision

A number of criteria are used throughout this *Guidebook* to compare the current use and potential effectiveness of individual tools relative to one another in each section. The criteria are discussed briefly in the single page narratives of the individual financial tool write-ups, chiefly under the "Advantages" and "Limitations" headings. The comparative criteria also are summarized in matrix form at the end of most sections.

The comparative criteria are meant to describe and compare single financial mechanisms with others within each section, in order to give the reader some sense of the prevalence of use and potential longer-term effectiveness of individual mechanisms. The criteria used in this *Guidebook* are drawn from the general literature on revenue raising and financing mechanisms, and the experience of States, localities and the private sector in using particular tools. Necessarily, some comparisons are somewhat subjective, since data on many tools are not available, for example, data on the incidence of actual use. Other criteria depend on public or private sector viewpoints, for example, whether a tool is considered relatively easy to use, readily accessible, or reasonably priced. Thus, the comparative criteria are meant to provide the reader some perspective on the large number of tools presented in this *Guidebook*, and some reasons why one or another tool might be utilized.

At the end of each section, the authors' judgements as to how individual tools might be compared to one another are summarized in a Comparison Matrix, with ratings of "High", "Moderate", and "Low" assigned to make these comparisons. On occasion, some numerical value or objective data are presented, such as the number of States using a tool or money raised or spent, and these data are summarized at the bottom of the chart. However, most typically the ratings, while incorporating such data, are for comparison purposes only.

Stars (*) also are used in the list of opening list of tools described in each section, as well as in the matrices, to provide the reader with a summary of which tools have been most highly rated. The stars (*) are meant to provide some measurement, necessarily subjective, of past effectiveness, and a sense of those financial mechanisms which seem the most durable, i.e., able to stand the test of time. Tools which may be short-lived, for example, tools which depend on tax code changes or special assistance program, are not considered durable.

Ten sections in this *Guidebook* use six, and sometimes seven, criteria to compare individual financial tools presented in the individual section. However, Section 2C on "Grants" does not have a comparison matrix.

For the ten sections, the criteria are the same for the most part, with several exceptions as noted below, and some variation in terms of emphasis or nuance in each section, as described in the narratives accompanying each section and each tool. A total of nine comparative criteria are described below.

1. Actual Use: All sections of the *Guidebook* give some indication of current State and local government, and/or private sector, use of a particular funding mechanism. Actual (current) use may give some indication of the stage of development of individual tools, i.e., how long they have been in existence, how widely available or applicable they are on a geographic basis, and their acceptability. Financing mechanisms presented in **Section 1 "Tools for Raising Revenue"**, must be **dedicated** to environmental protection, as opposed to being used for non-environmental purposes, to be counted. The number of States using a particular tool does allow some numerical data to be included in the ratings from "High" to "Low", for example, high use might mean that a tool is used in over twenty-five States, as opposed to low use, for example, under ten States. Actual use cannot measure the potential effectiveness of newly created tools, since by definition they are in their infancy.

2. Revenue Size: This criterion gives an indication of the relative annual sum of money that is raised or invested within States, annually, as a result of using the financial mechanism, or in some instances the potential sum of money. Revenue size is used in all sections, but only rarely is accompanied by dollar amounts since in most cases these data have not been collected nationwide. In those cases where actual use of a tool is low either because it is new or because it is not dedicated to the environment, **potential** revenue size is estimated. For example, tobacco taxes are widely used by States but typically not dedicated to environmental protection. However, since these taxes yield comparatively large revenues, size is rated "High". Revenue size gives some indication of the actual or potential effectiveness of a particular financing tool in terms of environmental benefits, although it is not presented in relationship to total environmental needs. Low revenue size may not mean that a tool is ineffective, because it may be offset by other criteria scoring high, for example, the ability to leverage other financial resources, or the ability to enhance environmental awareness. However, low revenue size may signal problems, for example, it might suggest levying an environmental fee or tax cannot be justified in terms of added administrative costs, time and political difficulties. A proliferation of many small programs may be confusing and burdensome, leading to a decline in public acceptability.

3. Revenue Stability: This criterion is used only for **Section 1 "Raising Revenue"** and for **Section 2B "Loans"**. Here, the relative stability and predictability of annual revenues is compared for each tool to indicate whether the revenue source can be relied upon and readily estimated, audited, and factored into budgetary decisions. Revenue stability can influence the dedication and use of taxes, fees and special changes (e.g., low-to-moderate), but stable revenue receipts would be suitable for funding State operating budget costs such as personnel, and larger, steady revenue streams could be used for capital for infrastructure construction. Many factors can contribute to revenue instability. Examples include consumer product substitution, pollution "havens" in different geographical areas, political decision-making, tax laws and general economic conditions. Revenues from pollution control fines, penalties and cost-recovery are unpredictable and may result only after protracted legal negotiations.

4. Revenue Cost/Savings: Revenue cost/savings is used in six sections. This criterion relates the rough dollar cost of the financial tool to the user with the amount of revenue saved or accessed as a result of using the tool. For example, private bond insurance is relatively costly but it can lower interest costs substantially through improved bond ratings, and may be critical to attracting bond investors. Similarly, private sector use of surety and performance bonds may enable a project to move forward. Privatization can result in lower construction, operations and maintenance costs, which may be translated into lower user fees, compared to the public alternative. Refinancing, while incurring new bond issuance fees and legal costs, can lower annual interest payments considerably.

5. Administrative Ease: Administrative ease is used as a comparative criterion in all sections, addressing practical issues pertaining to both the providers and users (clients) of the financial tool. Such issues include the basic complexity or simplicity of the mechanism, demands on staff time to process paperwork, handle applications and red tape, and the flexibility provided in the administration and use of a financial tool. For **Section 1 "Raising Revenue"**, administrative factors are of special concern to the government imposing the tax, fee or fine, for example, the administrative costs of imposing new fees, particularly establishing collection system, and the costs of legal enforcement proceedings for pollution fines and penalties. For the other sections, administrative ease also can refer to the users of the financial tool, for example, whether the tool is complicated to understand, whether using it is burdensome in terms of staff time and paperwork, whether expensive legal advice is required, whether voter approval must be sought. Tools which provide hands-on technical assistance can be administratively time-consuming for the provider, but on the other hand are easy to use for the client.

6. Equity: Equity also is used in all ten sections, with varying nuances as described in the text. Equity in some sections is used to compare the extent of direct public participation in the choice to use a given tool, or even how to structure the tool. For example, any bond or other local fund-raising device which requires local voter approval is described as highly equitable. Equity also is used extensively to compare the accessibility of the financial tool to small versus large potential users and to compare the costs of the tool for different clients or those who pay. Tools are most equitable if they reflect affordability concerns or special circumstances of the user, for example, in the case of fees and taxes adopting graduated or non-regressive rate structures. Taxes which are paid for by non-residents as well as residents, both of whom may benefit from an environmental improvement, also are highly equitable. Tools are relatively inequitable if all users pay the same price regardless of economic circumstances, if small users pay more since investment is considered more risky, or if certain businesses pay much more than others. Some tools are simply not available to certain small users if they are too costly or complicated, and thus are not particularly equitable.

7. Cost/Benefit Relationship. The cost/benefit relationship applies only to **Section 1 "Raising Revenue"** and **Section 8 "Community-Based Environmental Protection"**. Here, the relationship addresses "who pays" the tax or fee or other costs and "who benefits" from subsequent environmental project investment with the dollars collected. A high or close cost/benefit relationship results when people

who pay can see or directly benefit from specific environmental projects, such a temporary local sales tax add-on to acquire park land. A high cost/benefit relationship may enhance the public acceptability of the financing mechanism. A high cost/benefit relationship also describes situations in which the "polluter pays" principle is applied, although this may result in inequities if costs are economically burdensome. In many sections, a high cost/benefit relationship clearly is present since the users who purchase the financing tool do so for their own benefit, such as a loan or credit enhancement device.

8. Financial Leveraging: This criterion is used in half of the sections to compare the ability of individual financial tools to leverage, free up or attract additional dollars from other sources. For example, State Revolving Funds selling bonds to make loans are highly financially leveraged, since more projects can be initiated in the short-term. Loans are more leveraged than grants, and loans under 100% are further leveraged. Financial outreach, or technical assistance, is a leveraging device since local managerial capacity is heightened which adds to investor willingness to extend credit. Small businesses similarly can make improve their capacity to attract investment by steps such as preparation of business plans and Internet use. Some locally approved tax and voluntary community-based environmental protection fund raising are matched by other public and private sector monetary grants or donations.

9. Environmental Benefits: Environmental benefits can result in a variety of ways, some direct and others less tangible. The most obvious environmental benefit occurs when an environmental project proceeds as a result of using the tool, such as construction of a drinking water treatment plant or brownfields redevelopment. However, other environmental benefits may be more indirect. For example, pollution prevention and recycling, "green" products and marketplace substitutions, conservation easements and development rights purchases, lands placed in trusts, and other measures may forestall or delay impact of pollution, although difficult to measure in the short-term. Paying an environmental tax may result in heightened public awareness of environmental problems and public financing possibilities, as well as change subsequent polluting behavior. Some financial tools call attention to positive as well as negative environmental impacts and provide incentives to increase environmental financing. Other mechanisms enhance the popularity and acceptability of additional pollution control regulations. Hands-on technical assistance and outreach may increase local capacity to pay for and manage critical environmental assets. Involving the private and nonprofit sectors in project funding, operations and maintenance vastly multiplies the possibilities for environmental progress. In this *Guidebook*, only those financial tools which have no known environmental impact or are neutral are described as "Low".